

HIGH-SPEED DIAL-UP MODEM SESSION STARTUP METHOD AND APPARATUS

ABSTRACT

5 A method for establishing a high-speed modem relay connection over a voice frame network between an originating modem with an associated calling-leg gateway and an answering modem with an associated called-leg gateway is described. The method includes determining at a predeterminedly early time during end-to-end physical layer negotiations between the originating modem and the answering modem whether
10 both modems are high-speed modems, with the determining being performed by one or more of the associated gateways. If so then the method further includes terminating end-to-end physical layer negotiations between the originating modem and the answering modem, with the terminating being performed by one or more of the associated gateways. Finally, the method includes negotiating local physical layer on either end of
15 the connection between the originating modem and the calling-leg gateway and the answering modem and the called-leg gateway. By this method, the calling-leg gateway serves as proxy for the answering modem and the called-leg gateway serves as proxy for the originating modem. Modem relay connection apparatus for use in a voice frame network gateway to establish a data channel between two modems is also described. The apparatus includes an amplitude-modulated answer (ANSam) tone detector; a signal suppression mechanism responsive to said tone detector for suppressing signals between the modems to terminate end-to-end negotiation between the two modems; a code detector for detecting a digital call menu (CM) code responsive to an amplitude-modulated answer tone; and a proxy negotiation mechanism responsive to said code
20 detector for negotiating a local physical layer between the gateway and a local one of the two modems.
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